

**STREAM:** Cougar Creek

**DRAINAGE:** East Fork Jarbidge River

**GAWS COMPUTER NO.:** 170501,05,155,035,025,030

**SURVEY DATE:** August 24 and 25, 1993

**REPORT DATE:**

*March 15, 1996*

**WRITTEN BY:**

*Gary Lee Johnson*

**SURVEY METHODOLOGY:** The United States Forest Service Region 4, Level III Fisheries Habitat Survey Method (March, 1989) was utilized at five Sample Sites (SS's) spread somewhat equidistant beginning about 0.1 mi. above the river. Each SS was preplotted on the United States Geological Survey, 7½ minute topographic map of the area.

Upon locating a SS, a ½-inch mesh block net was positioned in and across the stream. The first 100 feet at each SS was sampled for fish using a Dirigo backpack electroshocker. Captured trout were measured (fork length), weighed, and returned to the stream following electrofishing. Aquatic macroinvertebrate type and relative abundance were assessed visually, using random substrate inspection at each SS. The first of five habitat transects began at the end of each fish sample area. Additional transects were placed at 50 foot intervals. Stream discharge was calculated by using timed float velocity measurements and water width and depth measurements over a uniform length of stream. Both air and water temperatures were recorded at each SS with the use of a hand held thermometer.

**LAND STATUS AND ACCESS:** The entire Cougar Creek drainage is within the Jarbidge Wilderness Area that is administered by the Jarbidge District of the Humboldt National Forest. Access to Cougar Creek can come from any of the Wilderness trailheads. A trail runs the length of Cougar Creek. From Jarbidge, Nevada, access can come from the Snowslide Trailhead located about 3.0 mi. above town. Both the Sawmill Ridge Trailhead and Slide Creek Trailhead are also located on the north end of the Wilderness which can be accessed from Idaho.

**WATERSHED DESCRIPTION:** Cougar Creek is a 4.2 mi. long northerly flowing first order stream within a 3.89 mi<sup>2</sup> volcanic geologic basin (Million scale Geologic Map of Nevada - 1977). The head drainage is ringed by five peaks over 10,000 ft. in elevation. Cougar Peak is 10,559 ft. high, The Matterhorn is 10,838 ft. high, and Prospect Peak is 10,439 ft. high. Descending ridgelines run either side of Cougar Creek to the river bottom which lies at 6600 ft. One 1.5 mi. long intermittent stream enters Cougar Creek about 0.5 mi. above the river confluence.

Upland vegetation within the drainage included mountain mahogany, aspen, fir, limber pine, mountain shrubs, and various

were only noted at SS-2. Grasses were noted throughout at generally low densities. Riparian Habitat Conditions all rated "good" and averaged 27.8. Rock was dominate in the riparian zone at the upper three SS's. Streamside vegetation provided a good stream canopy averaging 45 % of the stream area.

**HABITAT VULNERBILITY:** The Index of Habitat Vulnerbility (HVI) to management activities was rated "low" at all SS's. Streambank sensitivity ratings as determined from the combined SCS scores for upperbank vegetative protection and lowerbank rock content averaged a score of 11.8 (11-14). Surveyed Stations had "good" (SS-1) to "excellent" (SS-2 through 5) lowerbank rock content. Only SS-1 had a "good" rating for upperbank vegetative protection. Stations 3 and 4 had "fair" vegetative bank protection and Station 5 rated "poor". A bank sensitivity score of >13 indicates that one season of moderate livestock grazing can result in damaged streambanks. No ungulate streambank damage or grazing use was noted along Cougar Creek. Cougar Creek is not within a designated grazing allotment.

**FISH POPULATION:** Rainbow/redband trout occupied the lower approximate 1.5 miles of stream at a mean density of 158.4 fish per mile. The fork length on seven captured trout averaged 98.4 mm (74-184 mm). There were three age classes of trout present in the sample. The one catchable-sized ( $\geq 6$  in.) trout in the sample was captured above the fish sample area at SS-2, in a pool located between habitat transect 1 and 2. All captured trout were robust and in good physical condition. Piute sculpin were found only at SS-1 where 18 were collected at a density of 950.4 sculpin per mile. Ten measured sculpin averaged 68.2 mm (41-90). Sculpin distribution may extend up the stream 0.65 miles. The electro-fishing efficiency was deemed "good" to "excellent". No obvious fish barrier was seen however, the gradient would likely be creating a barrier for each of the two species found inhabiting the stream.

**ANGLER USE:** By virtue of it's remoteness, smaller size, and proximity of other fishable waters, Cougar Creek has never been reported fished on NDOW's 10 % questionnaire sample of licensed anglers.

**AQUATIC MACROINVERTEBRATES:** The bulk of the aquatic bottom fauna were mayflies and caddisflies which were occasional or commonly seen at every SS. Representative mayfly families included the following: Heptageniidae, Baetidae, Siphonuridae, and Ephemerellidae. Caddisfly types included rock, debris, free-living, and those that construct a square tubular house from vegetation (Brachycentridae). Planaria were abundant at the upper three SS's but, only rarely seen at SS-2. Stonefly larvae presence ranged from absent to occasional. Water mites were rare at two SS's.

Aquatic vegetation covered an average of 20 % of the stream bottom through fish sample areas. Filamentous algae was the dominant flora. Clinging algae covered an average of 22 % of the habitat transect water width measurements.

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**BEAVER STATUS:** The only beaver activity noted was some minor tree cuttings at SS-1. The narrow valley bottom, steep gradient, and lack of a dominant supply of willow and aspen would make Cougar Creek unsuitable for beaver occupancy.

### **CONCLUSIONS**

**STREAM'S IMPORTANCE:** Cougar Creek supports native populations of fish species in the Nevada portion of the Snake River Drainage. The fair quality of the stream for trout and good riparian habitat could provide suitable conditions for the rarer, native bull trout although none were collected.

**ISSUES AND CONCERNS:** None

**RECOMMENDATION:** The fish population in Cougar Creek should be reassessed during any future fish population surveys in the East Fork Jarbidge River drainage.

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